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Colleges and Young Men.

The effect of an ordinary college education is discussed in a very interesting manner by W. R. Sessions, former secretary of the Massachusetts State Board of Agriculture. In his usual clear and straightforward manner, Mr. Sessions cited the cases of twenty young men of his acquaintance who went to college.

Four of them went there for a special purpose and were successful in their chosen professions. Two became successful judges, one a good lawyer and another a man of marked ability as a minister. Of the others, four are fairly successful teachers, two are lawyers struggling to keep body and soul together, doing all sorts of legal work, some of which would be shunned by the high-minded; one is a minister with a small parish, another a manufacturer of cheap jewelry, two are bookkeepers, one a clerk in a wholesale grocery store, four are engaged in farming, and finally, the last man is a day laborer, and is not very successful at that. Mr. Sessions draws the conclusion that all but the first four would have been better off, so far as concerns what is commonly termed success, if they had not gone to college.

Possibly such a verdict would not be fully justified in an average of similar cases. Many regular college graduates of considerable ability have in recent years entered farming and other business pursuits, and these, if young and ambitious, often take a much better standing in the community by reason of their mental training and culture.

Again, it is observed that none of Mr. Sessions' twenty rate very low. Excepting possibly the two shyster lawyers, all seem to be filling decent positions in the community, with no paupers, loafers or criminals among the number, rating in this direction apparently rather above a random twenty, which might be taken from among graduates of common schools.

But coming in a general way the truth of Mr. Sessions' belief that a college education in many cases fails to produce the results expected, the importance of a careful choice becomes evident. Education is really a polishing and sharpening process. Of course it pays to sharpen tools. But if the grinder lacks skill and patience, if the tool is soft and flabby, or if the stone lacks grit, the grinding may do more harm than good.

Colleges are of many kinds. The young man who chooses an institution giving the old-fashioned general and classical course certainly incurs risk, since an education of this kind is of direct help only for a few of the modern occupations, and seems to actually render the graduate unfit for some fields of effort. Other courses, in which science, modern language and bodily culture are prominent, are more in touch with modern life and give a solid foundation for most occupations. In large colleges of this kind study may be so specialized that the graduate has already made a good start toward the mastery of his occupation.

The agricultural colleges are fine examples of up-to-date institutions of this kind. No doubt Mr. Sessions' four farmers would have had a better mastery of their occupation had they attended such a college. Young men are generally unwilling to sacrifice mastery even for general knowledge and wide culture. Yet these also may be acquired at the agricultural or scientific college. Much depends on the personality of the instructors; far more than the young student may realize.

Men of substance, enthusiasm, poise and character are better than text-books and laboratories as a teaching power. All such considerations make important the wise choice of the kind and place of college education. No question but the mental cutlery is far better for skillful sharpening and polishing. The difficulty is to get the best edge and finish, and without spoiling the tool.

National Road Building.

Side by side or closely together go rural mail delivery and the good roads movement. The fact appears more plainly each year that the development of one causes stronger agitation in favor of the other. Good mail service is impossible on bad roads, while the presence of good roads gives the strongest backing to an application for new delivery routes. Neither is complete and satisfactory without the other. It follows that the contemplated Government extension of the delivery service will cause a popular demand for road improvement too strong to be ignored. From the fact that the mail service is a national affair, the tendency is growing stronger to look to the Government also for help in the closely allied road movement. Towns are plainly un-

able to bear the cost, and but few States feel able to fully meet the situation. But the Government, which has spent \$4,000,000 for improving rivers, harbors and canals, paying the entire cost of such works, might easily spare an equal amount to help develop transportation by land.

A plan already submitted to the last Congress makes an excellent division of the expense. The Government and the State each pay one-half. Then the State would have power to levy one-fourth upon the counties and towns. This plan brings the local cost down to a point where the towns could meet it without hardship. The adoption of such a system would mean good roads and good mail service everywhere. The comforts and facilities of farm life would be decidedly increased, likewise the market value of country property. Such a measure would do more for the farmers than any of the

purlin timbers, on which runs the carrier of the horse fork used in the storing and removal of hay and straw. In the centre of the octagon is placed a circular silo fourteen feet in diameter and thirty-four feet in height, reaching to the level of the purlin of the roof. The silo has a capacity of eighty to one hundred tons of silage, and the space in the octagon around it will readily hold one hundred tons of hay. The floor is of cement concrete on a firm foundation of rubble stone, and is on a level with the ground at the east entrance.

The cow barn is one hundred feet long, east and west, and thirty-seven feet wide. It is provided with rows of swinging stanchions and box stalls and will readily accommodate forty head of cattle. Sectional plank flooring is provided for the cows to stand upon. The floor is concreted. Deep gutters behind the cattle connect with an

the two yards may be made one for the time being. The yards are thoroughly underdrained with land tile. The surface is covered with cobble stones and sand. In each yard, next to the barn, are two lean-to roofs to furnish temporary shelter from rain or excess of sunshine. The water tubs and faucets are under these roofs.

The structure is built of a size to answer its purpose for many years. The storage capacity of the octagon is ample for the hay and fodder of the horses, cows and sheep of the college farm. If the herd of dairy cows should increase so as to overflow its quarters, the cow barn may readily be enlarged by extending it at one or both ends. An additional silo can easily be constructed stand next to the octagon at its east entrance. A. A. BRIGHAM.

Kingsbury, R. I.

have also found that timothy and redtop make excellent hay when sown and grown together. Also that when any grasses are sown together, they must be of a kind that will mature at the same time, and further, that if we want clover of any kind, it should be sown by itself, and as a whole, any kind of grass seed should be sown when nature would dictate, or at the time it would naturally grow, ripen and fall to the ground. On the whole, we cannot beat nature's own act.

But what is to be done to keep up the fertility of the soil. So far as I can now learn the greatest redeeming measure in cultivation; intense cultivation. So far as I can now see that is to give us our relief. Our main hope is in sunlight and air applied persistently by stirring the soil.

GEORGE M. CLARK.

Middlesex County, Ct.

added sour milk and dishwater from the kitchen. For variety, a shovelful of ear corn was occasionally given. Included in this lot of pigs was the brood sow that shared in the above ration.

The above also corresponds very nearly with the ration fed the first lot mentioned. I am aware that these are not unusually heavy weights for this age of pigs, but may it not be considered a fair showing, taking into account the inexpensive feeding ration, refuse beans at \$12 per ton as a basis? So great has been the call for these beans at one of the great bean-picking houses, one-half mile distant, that it has at times been unable to supply the demand.

As beans are unusually rich in protein, may not Mr. Gregory's ill success be attributed to an absence of a more starchy food as contained in corn, potatoes, etc., for supplying elements for a properly balanced ration?

IRVING D. COOK.

Genesee County, N. Y.

Corn Canning and Pea Canning.

More than once have I referred to the fact that many cities in this broad land of ours lead all the others in some essential product or industry. This was borne in upon me with unusual force at Atlantic, Ia., where is located the largest corn-canning industry in the world. In the very brief season in which it is possible to put up green corn they can more than five million cans of corn. It takes 2000 acres, or four square miles, to raise the corn for this factory. In order to make the season last as long as possible, they choose the greatest variety of soil in relation to sun and shade, moisture and dryness, and plant it as early and as late as is feasible.

When the season opens they break it by hand, and then put it into the machine, and it is never touched by hand again. The machine strips it, cuts it from the cob, puts it in a can, fills the can with water, solders it, tests the can to see if it is air-tight, puts these cans (200 at a time) in a crate, and cooks them in hot water. They carry through all these processes 200 cans every minute and a half, or a can in about a third of a second, and they keep up this pace for sixteen hours a day.

I was there when they were canning peas. They put up 1,200,000 cans of green peas, but this is not equal to a pea-canning establishment in Wisconsin. This Atlantic company raise eight hundred acres of peas themselves.

It is the business of one man to study how to raise the most peas possible on each forty-acre lot, and how to have them last through the longest possible season. The peas are mowed and brought into the factory immediately, and pitchforked into the reel-like revolver about ten feet long and six feet in diameter. It is hexagonal, with rubber belting for the cover, and with innumerable paddles within. The pods, vines, weeds and all, just as they are mowed, are pitched into the machine, and the peas are shelled without being bruised, and roll out without taking any of the pods or leaves with them, and the pods and vines go out and load themselves upon the waiting rack at the end of the building.

They keep four hundred head of cattle the year round on the pea vines that come through the machine.

They put up fifty thousand cans of peas a day through the season. They use four of these separating machines, as they style the thrasher, and for their use a few brief weeks pay \$10,000 a year. This seems like an enormous price, and it is a fabulous amount for the patentee and manufacturer, who has several hundred of them in use in the West, but when one thinks that it is less than a cent a can, and that it would be an absolute impossibility to shell them by hand, the price seems small.

A. E. WINSHIP.

Berry Culture Condensed.

Set the plants in the spring, as soon as the land is in good condition. Set the crown level with the surface and press the earth firmly around the roots. For the matted row system, rows should be four feet apart and plants should be one to $\frac{1}{2}$ feet in the row, depending on varieties. For such varieties as Stella, the former is about right, and for such rampant growers as Senator Dunlap or Sample, the latter is close enough. When you set be sure to set at least one row in four of staminate kinds.

Cut off all blossoms the first year from the spring-set plants. Runners that are to be cut should be cut as soon as they appear, not after they have sapped the plants in making needless growth.

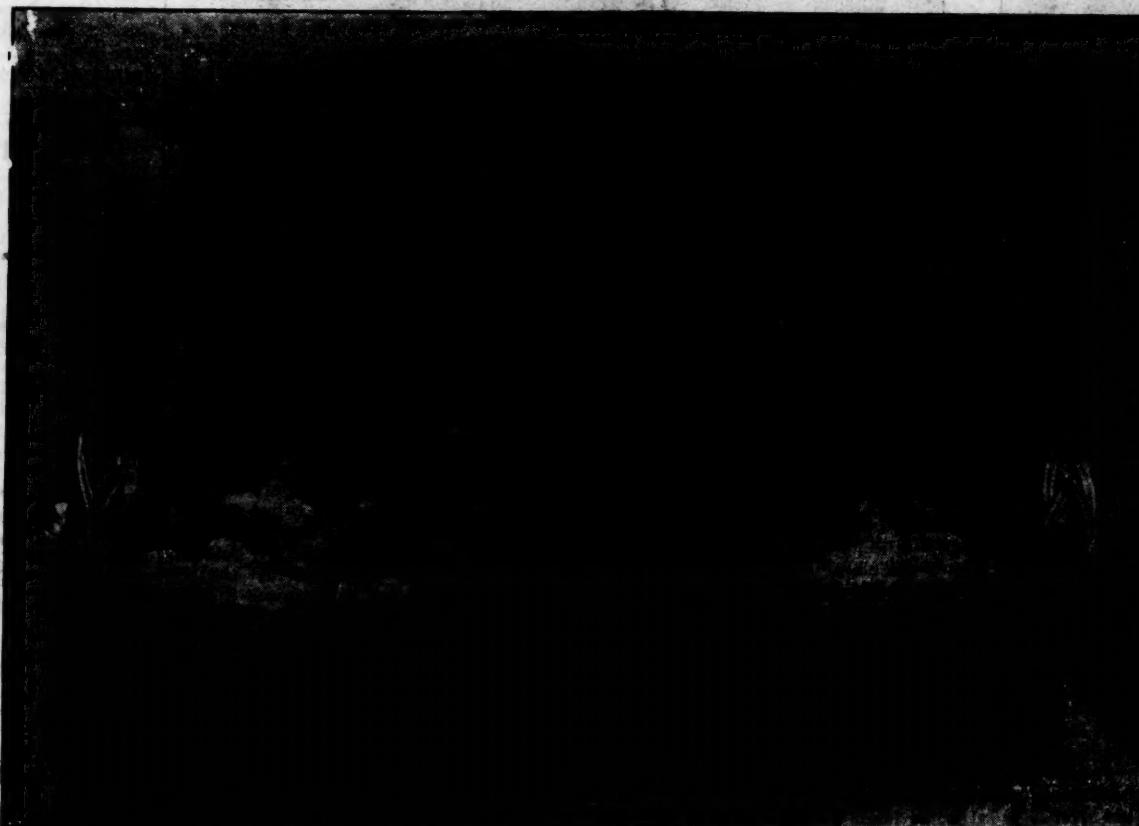
Keep the surface of the ground continually stirred to kill weeds and to conserve moisture. When runners start, place them so as to fill up the vacant spaces between plants. If they are liable to get too thick, cut off the surplus. For best results plants should be set to eight inches apart, at fruiting time, each way.

For largest and finest berries let only a few runners root, not over a dozen to each plant set, thus making a narrow matted row; then keep all other runners cut. For best results they should never be allowed to get too thick.

After the ground has frozen solid, cover the plants with straw or hay or straw; anything free from wood seed will do. Remove mulch as soon as growth starts in spring. Tewksbury, Mass.

B. KINE.

We had four cows at the Pennsylvania college farm giving as follows: 8000 pounds milk, testing 5.6 per cent, equal to 415 pounds butter; 6000, 4 per cent, 270 pounds butter, and 2000, 3.6 per cent, 100 pounds butter—all having same care and feed at a cost of \$40 per head. Is any one going to say that you can make a good cow out of a poor one, by feeding her?—Prof. G. A. Smith.



SOME CHOICE THOROUGHBRED ANGORA KITTENS.

much-discussed political measures or half a dozen of them combined, and it is a project for which congressional support will be readily granted as soon as it appears that the people are deeply interested.

In some States better roads are not likely to come at all for the present without a heavy surplus aid, while other States with more money will build a good many roads according to present plans, one-half, more or less, of the total cost being levied on the towns. But with national aid the towns would at most pay not over one-quarter the total cost, while the quarter appropriated by the State would not greatly affect State taxation. Government revenues show a big surplus, and no new taxation would be needed for its part of the work. Surely no plan could be devised to distribute the burden of needed road improvement with greater evenness, smoothness and adaptation.

A Modern Dairy Barn.

The Dyer dairy barn was the result of an attempt to supply two very serious deficiencies of the Rhode Island State College. The hay, straw and fodder yielded by the college farm had to be stacked out of doors, and no dairy herd was kept because of the lack of a building in which to house the cattle. The institution possessed various dormitories, laboratories and other buildings, and the problem was to secure, at a reasonable cost, a barn which should harmonize with the other somewhat imposing structures (mostly built of stone), and yet fulfill economically the very practical purposes of sheltering a herd of dairy cows and furnishing storage room for hay, grain, straw and fodder. An appropriation was made by the State Assembly for the purpose, and it was decided to adopt the octagonal form of structure for the storage building as giving a great amount of economical storage space for the size of the building.

For housing the dairy herd an oblong structure was planned to connect with the octagon on its south side. The two structures combined to give a desirable architectural design and convenience in the storage and removal of fodder and in the feeding and management of the live stock. They were also planned so as to accomplish two other very important objects.

First, to provide storage room for all fodder and grain in apartments away from the cattle. (The octagon can, by shutting the large double doors connecting it with the cattle section, be entirely cut off from the latter, which can then be fumigated or sprayed, if these operations ever become necessary.) Second, to arrange so that all of the manure and litter could be removed promptly from the building and applied directly to the land. There is thus no fermenting mass retained in the building.

The octagon is sixty feet in diameter and twenty-one feet in height to the plates. Every cubic foot of its interior space is available for the storage of hay or fodder. A circular steel track is carried around under the roof, attached to the rafters and

adequate sewer system, which takes all of the drainage and roof water and carries it, together with any seepage from the gutters, to a cistern situated about five hundred feet down the slope to the west of the building. This structure has a monitor roof, except in the middle where the granary is located in a second-story room. Here, over the south entrance and passageway through the cattle barn to the octagon, is provided ample room, furnished with bins for storing grain in large quantities. A stairway leads from near the octagon door to the granary above, and near the stairs is a water-closet with automatic discharge connecting with the sewer system already mentioned. On either side of the passageway are placed troughs for grain, connected by metallic chutes with the different grain bins in the granary above. An iron watering-trough is located conveniently on one side of the passageway. Large windows on the south side of the cow barn admit abundance of light. The sides of the monitor roof are mainly windows which, when necessary, are opened by means of rods operated from the floor to provide ventilation. These windows also admit a large amount of light. Large doors are placed in the east and west ends of the structure, and a team can be driven through in front of the rows of stanchions from one end of the barn to the other.

On the north side of this structure are the east and west wings, which fill in the space between the cow barn and two sides of the octagon. The west wing has a lower floor than the main building and is used mainly for the storage of sawdust, which is used for bedding. At its west end stands the manure spreader into which the dung and soiled bedding can be dumped through a door behind it, opening directly from the cattle barn. The east wing is the only part of the structure which has a cellar underneath it. This room is provided with a strong plank floor, and has been used in the absence of other shelter, for a small flock of sheep, and some of the time for calves and yearlings, and for storage of straw.

The cellar is for the storage of roots. It has two entrances, one at the east end of the building, and one inside near the centre of the cattle barn, both being provided with suitable stairways. The cellar is thoroughly underdrained and has a concrete floor. The cows are fed hay, grain and silage upon the concrete floor in front of the stanchions. There are no mangers. There are no partitions between the stalls, and in every way possible corners and crannies where disease germs might gather are avoided.

The cow yards, two in number, are located in front of the barn, each extending one hundred feet to the south of the building, with a road to the south entrance passing between them. Board fences extend for fifty feet from the building, on the east and west sides of the yards, for shelter. Woven-wire fencing is used for enclosing the rest of the yards, and suitable iron gates are provided. By opening the two opposite gates across the roadway and closing the gate at the end of the same, we can

Sorting Seed Corn.

I know of no better way to sort and prepare the seed corn than to place forty or fifty ears on some boards or tables and with all the tips pointing one way. Select an ear that most nearly represents the type you prefer. With this ear in your left hand go over all the ears on the board, and with the right make your selections. First discard those ears which have kernels unusually broad, long or thick; also those which are very narrow, thin or short. This is absolutely necessary before we can expect any plants to drop a uniform number of kernels in each hill.

Discard all ears with kernels which are shriveled or are poorly pointed, indicating low vitality and poor feeding value. The butts and tips should now be shelled off and the ears shelled as above described. But this is not all. This corn is not ready for the planter until it has been picked over by hand, removing the broken, rotten, discolored, irregular, weak and shabby grains. This seems like a great deal of expense, but no farmer can afford to do less than this.

AMES, Ia. PROF. P. G. HOLDEN.

Special Pig Foods.

All sorts of topics work into the discussion at institutes, and questions a little out of the beaten track are advanced. Here is a bit of conversation on alfalfa, oilmeal and artichokes from a recent Ontario farmers' meeting:

Q.—What do you think of alfalfa as food for pigs?

A.—Very rich food, giving good results not only for pigs, but all classes of stock.

Q.—You say that oilmeal is valuable for young pigs, especially when fed with whey. How much would you give young pigs at weaning time, say eight weeks old?

A.—A good handful to a litter of eight to ten pigs.

Mr. Whately, Mount Elgin: I mix ten pounds of ground oilcake to one hundred pounds of mixed meal. That would be about a day's feed for one hundred pigs from eight to twelve weeks old. I find it very useful, especially when feeding whey.

Q.—What are artichokes?

A.—C. E. Elford, Homerville: They are plants that look something like sunflowers. Their chief feeding value is in the tubers, which develop like potatoes.

Q.—How do you plant artichokes?

A.—The

Moderate Trade in Vegetables.

The vegetable market is reported a little easier this week. Dealers say that the week preceding Easter is usually marked by rather light trade, but the demand usually picks up again after Easter. Hothouse stuff has been growing more abundant, and has been compelled to meet lower prices for Southern produce; on the other hand, the cloudy weather has tended to retard the ripening of tomatoes and cucumbers. Were it not for this fact the market would have been glutted; as it is, the prices have shown a moderate decline. Dandelions and native spinach have been abundant and prices are lower. The same is true of Southern beet greens. Parsley has also been selling at lower figures. Cucumbers are off in condition in New York city, and Boston is likely to feel the effects before the end of the week.

The cold weather will delay the native parsnip crop, which otherwise would have been ready for market earlier than usual. Rhubarb is becoming very abundant and prices drop a point or two from week to week. Ordinary vegetables are mostly unchanged, but parsnips show a tendency to decline. But few squashes are in the market, marrow and turban being practically exhausted. Hubbard squash have the field to themselves and bring high prices. The onion market is still in very bad shape, although some dealers say that the conditions are better for choice hard stock. A great many of the onions offered for sale are soft and sprouting. The lower grades are for sale at almost any price, and help to depress the general market. Potatoes are arriving in moderate quantities from new districts and quite freely from New York State and the West; the demand being only moderate, prices have ruled a little higher than reported last week. New potatoes from Bermuda and the South are becoming plenty, and help to depress the general market. Sweet potatoes are quoted at former prices.

Beef Provisions Higher.

Beef has advanced somewhat along all grades, and the demand is good for the season. Beef arrivals for the week were smaller, being 155 cars for Boston and 150 cars for export, a total of 305 cars; preceding week, 148 cars for Boston and 54 cars for export, a total of 202 cars; same week a year ago, 136 cars for Boston and 188 cars for export, a total of 324 cars.

Pork provisions are about as last quoted. Receipts at local markets are light, but having increased somewhat at Western points, prices here have not advanced to any noticeable extent. Lard is slightly lower.

Boston packers have made an unusually small kill of hogs for the week. The total for the week was about 20,500, preceding week, 23,500, same week a year ago 23,600. For export the demand has been heavy, the total value by Boston packers having been about \$294,000, preceding week \$185,000, same week last year \$152,000.

Hog packing at Eastern points, exclusive of New York, Philadelphia and Baltimore, for the past twelve months was 2,750,504, of which 1,702,190 were winter and 1,053,314 summer packed. New York, Philadelphia and Baltimore received 1,845,734 during the year, of which 1,251,402 are credited to the summer and 594,333 to the winter season. The total Eastern packing for the year was 4,641,239, of which 2,933,892 were summer and 1,687,647 winter packed.

The movement of hogs has considerably increased, under some betterment of road conditions in the interior. Total Western packing 350,000, compared with 280,000 the preceding week, and 315,000 two weeks ago, according to the Cincinnati Price Current. For corresponding time last year the number was 385,000, and two years ago 400,000. From March 1 the total is 1,430,000, against 1,700,000 a year ago—a decrease of 270,000. The quality of current marketings is mostly good.

Extra mutton and lambs bring good prices, receiving full quotations as given, but light-weight lambs do not seem to be wanted.

Poultry and Eggs Steady.

The following special report is prepared by W. H. Rudd, Son & Co., Boston, under date of April 9: Receipts of fresh-killed poultry are quite light, as is usual at this season of the year. A few early broilers are coming forward, dressing from one to 14 pounds each, which are in good demand, and bringing readily \$1 per pair for best stock. Fresh dressed fowl are quotable at 15 to 16 cents, with live fowl bringing almost the same figure. The Jewish feast days occur the present week, and the demand for such is always heavy at this time.

The present quotations are extreme and lower prices are expected with heavier receipts, although the prospects for the next few weeks are for unusually high prices for live hens. So few soft roasting chickens are coming forward that there is hardly enough to establish quotations, but fancy stock would bring 24 to 25 cents per pound. The majority of stock shipped as roasters are too hard and bony to be suitable for the trade, and are not in as good demand as old fowl. Spring ducks are arriving from nearby points, and the market fairly steady at 30 cents per pound. This price is extreme, and the tendency is for lower figures. Receipts of squabs are increasing, and \$3 per dozen is outside figure for birds dressing seven to eight pounds to dozen.

Eggs are bringing the lowest price of the year, and as many lots are now being placed in cold storage, it is anticipated that the market will hold steady for the balance of the month. Best storage-packed Western eggs are bringing 15 to 15½ cents, with 17 to 18 cents an outside quotation for nearby stock. There is little difference in price at this season of the year, as all eggs are running fresh, but with warmer weather later in the season the tendency is for Western eggs to decline in price and nearby stock advance, prices drawing wider apart as the difference in quality increases. The low prices for storage eggs in years past are simply a matter of record, and with the continued increasing consumption over production, the market will not have the wide fluctuations in price which have been noticed in former years.

Receipts of eggs at New York are something enormous, last week exceeding by 5,000 cases any week in the history of the Mercantile Exchange. Receipts last week amounted to 137,183 cases, which was ahead of week ending March 24, 1894; during that week 132,084 cases were received. These heavy arrivals have had apparently no effect on the market prices. The consumptive demand has increased wonderfully and receivers are no more than a day behind in getting out their arrivals. Buyers on the Mercantile Exchange, who represent dealers selling directly to retailers and consumers, have been buying liberally. Receipts on Tuesday of this week nearly equaled those of the record-breaking day last week, when something over 33,000 cases were received. Last Tuesday receipts were 32,446 cases, next to the highest ever recorded.

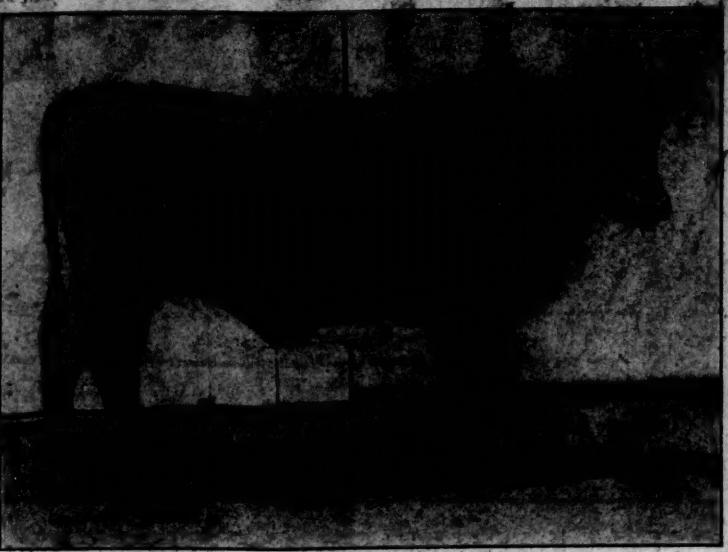
Types of Cattle for Feeding.

The net results of beef cattle feeding depend considerably upon the kind of stock used. It counts on quality fully as much as on quantity.

At the Tennessee station satisfactory gains were made when suitable rations are used, even with native cattle. In six of the groups a gain of practically a pound and a half per day was made throughout the entire feeding period, a gain that would compare very favorably with that made by animals of better quality, but as these animals did not dispose the flesh on three parts of the body where the most valuable meat is found and were coarser in bone and contained more fat, they did not take on the high finish of animals of better quality, nor does the meat bring such a high price because of the tendency of such animals to develop largely in the quarters.

Most of the stock in the Eastern States is inclined to the dairy type, or is scrubby and not well suited for any purpose. For beef feeding, the first essential is to get good stock or at least to improve the ordinary stock by crossing with pure-bred sires of the beef breeds.

The illustrations of specimen animals fed at the Tennessee station show the general



A GOOD TYPE OF FEEDER, SHOWING PLENTY OF DEPTH.



BACK OF A GOOD FEEDING STEER.



A POOR TYPE OF FEEDER, LACKING IN DEPTH.

Full information can be found in Sparks, who wrote a biography of Major Andre more than fifty years ago, as did also Winthrop Sargent in 1861.

The conception of this great treason, whereby one of the bravest officers in the British army suffered death, was the brain-work of Benedict Arnold, a brave and reckless officer of the Continental army, but who, becoming dissatisfied with the treatment he received from his superiors, conducted himself so as to be reprimanded by Washington, and finally made up his mind to enact a part similar to that played by General Monk in the restoration of Charles II. to the British Crown, for which he was rewarded with the dukedom of Albemarle. The American army, just before the treason of Arnold, was apparently on its last legs; it was half clad, half starved, the soldiers unpaid, and the Colonial money was almost if not absolutely, worthless. This was Arnold's opportunity, and he took into his confidence Major Andre and an American Loyalist, Beverly Robinson, who were to act on the part of Sir Henry Clinton. By getting the Hudson river into the possession of the British, it was supposed that the American cause would become so hopeless that at least an opportunity would be offered for negotiation, and if successful, Arnold would have the credit of saving the colonies to the Mother Country, and consequently be liberally rewarded. To accomplish the desired end, he resorted to the blackest treachery. In 1780 he obtained command of West Point, for the very purpose of its capitulation to the enemy, but his scheme to restore America to her old allegiance was detected by the capture of Andre, and he fled to New York, a disgraced and hated traitor, afterward obtaining a brigadier-general's commission in the British army and a sum of money to replace the losses he is said to have incurred in the attempt to sell his country, besides committing numerous depredations on his countrymen. His life has been written by Sparks and Isaac Newton Arnold. Both writers have placed his great treason before the world in a most unenviable light.

It may not be uninteresting to your readers to relate some of the circumstances connected with the arrest of Major Andre, as shown in certain correspondence of the times in connection with his trial and execution as a spy. Although they are doubtless known to every schoolboy in the land, who has been brought up to lament the fate of this brave British officer and gentleman, as well as to turn with loathing from the name of Arnold, his betrayer, these old memories will bear repetition. That the execution of Andre was deeply deplored there can be no doubt. The condition of our army was such as to require his death, and there is no doubt of the sincerity of Washington's belief that Andre "was a spy, and justly amenable to death as such." His very judges bewailed the sad necessity which subjected him to a punishment which reduced his manly soul. So said a writer, and so in effect wrote Harry Lee, the celebrated partisan officer of the Revolution, then major and afterward lieutenant-colonel in the army, who delivered the oration upon the death of Washington. The subjugation of America by the surrender of West Point by Arnold was the object in view, and Sir Henry Clinton committed the management of the affair, as far as the British were concerned, to Major Andre, with whom he had an interview in the woods near Stony Point. On leaving him Arnold gave him six papers, containing full information as to the state of the defenses at West Point, and also passes enabling him to return to New York. One Joshua Smith, who was not, however, in the plot, undertook to guide him by land a part of the way. Contrary to the express injunctions of Sir Henry Clinton, Major Andre adopted a disguise, and after Smith left him traveled alone toward the city, when he was stopped by three young men whom he supposed to be Tories, but who were, in fact, "cow-boys," or soldiers of fortune as it were, yet known to be patriotic, to whom Andre innocently told that he was a British officer. They searched his person, and finding the treasonous documents in his books, arrested him. He was tried by a board of fourteen American generals, found guilty of acting as a spy, and condemned to death and hanged upon the gallows. His body was buried near the spot where he suffered death, but in 1821 it was taken to England and interred in Westminster Abbey. His captors, John Paulding, David Williams and Isaac Vanwart, were rewarded by Congress with silver medals and an annuity of \$200 cash.

The house to which Andre was taken by Major Talimadge on the evening of Thursday, Sept. 28, 1780, is still standing in the quaint village of Tappan, and is known as the Seventy-six House. It was here that Alexander Hamilton (then aid to Washington) and Josiah Quincy. The American officer who had charge of Major Andre after his arrest was Major Benjamin Talimadge, a graduate of Yale and a man of distinction in the army, and of the strictest integrity, who in 1833 wrote his recollections of the affair to Jared Sparks and Josiah Quincy.

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son of Benedict Arnold, if we except the outrages upon his countrymen.

Irene Newton Arnold, in an article written as late as 1878, says that in 1782 Benedict Arnold, after committing as many depredations as he could upon his countrymen, Lord Cornwallis having then surrendered his army to Washington, called for England with his family. He had staked all, and lost all. "He knew no fear; he passed the deck of the packet and saw his native land disappear in the distance; he was the wreck of a once noble career, now the wretched relic of an abortive and guilty enterprise." Lord Cornwallis was a fellow passenger with him across the ocean. Arnold, on arriving in London, was received with open arms by George III., and caressed by the ministers. Leaning upon the arm of Sir Guy Carlton, he was presented at court by Sir Walter Stirling, and was soon walking with the Prince of Wales (George IV.), in the public gardens. It must have been a suggestive spectacle to have seen Benedict Arnold, the greatest traitor the world over, leaning upon the arm of the most licentious man in England, who subsequently became King. Arnold seeking the aid of the latter to hide the lameness he had acquired from wounds received in fighting against the crown.

But through all he was not deserted by his wife, the beautiful Miss Shipp of Philadelphia. The fascination her beauty, her goodness and her grace exercised over all was not less marked in England than in America. She was said to be the "most beautiful woman in England," and our author says: "The Queen was so interested in favor of Mrs. Arnold as to desire the ladies of the court to pay much attention to her." She received a pension of \$200, and her children \$100 each. Arnold received something for his alleged losses, but not so large an amount as he had expected. It is significant that after his arrival in England he changed the family heraldic motto, *Gloria miti cessa* (all I seek is glory), to *Nil desperandum* (never despair)—thus showing the indomitable nature of the man. But who of us would not have preferred to share the sad fate of Andre, than have lived as Arnold did, dishonored and degraded in the eyes of every loyal American?

Literature.

Whoever wrote these letters, published as "Letters of an Actress," has given us some interesting glimpses of a child's personality as revealed on the stage. It is to be wondered if these little folk have any child-life, and if they do enjoy any of the unconscious freedom which is natural to the child, when they are studying so early in life about the position of the hands and feet, or the graceful attitudes in which they must place themselves on the stage. These letters surely exhibit the fact that children are children even behind the footlights. The young lady begins to write home when she is playing "Little Eva," and she is curious over her mother's opinion of her stage picture. With all the unconscious vanity of childhood she writes, "Isn't my picture beautiful?" and in another letter she narrates her trials with another young lady who is as ambitious as herself to star. "What do you think?" she writes, "there is another child in it (a new play), and it is Mrs. Palmer's little girl Estelle, a white, fat, waxy thing, with hair like barley-sugar in ringlets, and a tiny nose and blue eyes—such a blue! I believe she is older than she says, and her mother fed her on gin to keep her little." Again the small, proud lady says: "The best of being an actress is that there's always something happening." That the miss feels very much grown up is shown by a sentence in a letter which reads: "You can tell the children that if they're not good and most obedient I shall put the money I meant for their presents into their savings-box instead. One thing I have learned which I wouldn't tell any one but you, I'm not a real actress, like Aunt Gertie, but I can imitate. I'm a born mimic. If I've once seen a thing done I can do it nearly as well, except when I have to be natural and sincere and touching. That's why I'm going for comedy more than pathos—not that any one knows but myself that all my emotions are false." The letters throughout rather bear out this assertion, as from childhood the actress does not complain of the emotional parts as tiring her. Much insight into the life on the stage and off is given in these letters. In attempting to conceal her identity, the author robes her letters of the impress of the intimate life of a woman of the professional world. On the whole, the letters will afford pleasing entertainment, especially that part in which the child actress comments on her competitors and on her own personal charms. [New York: Frederick A. Stokes & Co.]

After all these ages there is light, the light of scientific verification, and the future is disclosed to us as one which shall concern human beings who have grown wise enough in knowledge to be able to cast off religion, which is an unfortunate habit of unfortunate organisms with an unfortunate pedigree ground into conscientiousness by an unfortunate environment." At least we are thus informed by Mr. J. K. Haywood, a member of the New York bar, who has written at length on the subject, "*Rebuttal of Spiritualism et al.*" Granting that this gentleman is honest in his views, yet one can hardly welcome them in a gracious spirit, for Mr. Haywood, in his egotism of proud conceit, is disgustingly saucy and slangy in his arguments. The opening chapter raises and discusses the subject of the mind. "What is the mind?" In the process of developing a logical conclusion to his question, the author expounds various theories of well-known psychological writers such as Kant, Richter, Herbert Spencer, etc. In meeting the expositions set forth by these men, Mr. Haywood evinces his basis for his own views. It is a clever manner of arguing to explain such statements of a famous author as will serve one's end, and in the refutation or agreement advance one's own creed. Doubtless the author of this weighty work on spiritualism is the possessor of a brilliant mind, but the illumination he has sent forth is of a particularly cruel white light, for it blinds where it should enlighten, and lightens where it should blind. The manner in which the problem of the soul of man is treated throughout leaves one in doubt whether Mr. Haywood is exhibiting his sharp wit or is in earnest, honestly believing all he writes. One entertains no doubt of Col. Robert Ingersoll's statements for they were made with a dignity and with certain respect. "Although the author refers frequently to Ingersoll, and seems to agree in many respects with him, yet the way in which he approaches and meets the religious tendency of the world is unfortunate. It is neither convincing nor interesting. We are told that if Adam never existed,

why then the "soul life" is a myth, for it all depends upon Adam, as in the garden God breathed into the body. He made the breath of life and Adam became a "living soul." Could there be a Being "who created him as a sensitive plate, threw it on a dunghill and then sent him to hell, because the photograph was not aesthetic?" Why contend for design in evolution," argues the author. Again, "the religious attitude is the spiritual product of penitence developed through the ages in the presence of harmful forces." God, mind, soul and free will form the principal subjects of discussion. We are informed that we are only victims of cause and effect, that it is not our fault that we are the non-criminals instead of the criminals, and society has only the right to protect, but no authority to punish. In effect the foundation of ages is swept away from under our feet by one J. K. Haywood, and we are left weak and trembling on the "scientific verification" creed. Not always do we believe the evidence of our senses, so our new support may be as strong as the advocate claims, yet it is clearly evident it is beyond our age. Critically, the book has little value. The coining of new words is done of the wholesale plan throughout, so that one almost needs a new dictionary. The reasoning process is much mixed, and the theories of various authors so confused that it is a work of art to discover the author's own conclusions. This style in which the book is written resembles a collection of lectures, the chapters having no connection save the commonness of being metaphysical discussions. Yet in all these odd essays or chapters Mr. Haywood says some bright things and makes some forcible statements. The book will interest those looking for the kind of "light" which the author supplies. The book is to be classed with the other which seeks to destroy a man's faith. To some, life may be almost unbearable with God, but deprived of all divine support what would remain to satisfy, what has this man and others of his stamp to offer with his gloomy "scientific verification" creed? [New York: Peter Eckler.]

Tito is a story of Italy, and that fact alone will draw the reader's attention to Mr. William Henry Carson's latest novel. There are many inconsistencies in the plot, and Tito is a strange character of stranger parents. It is the birth of this boy which furnishes the main working theme of the story. Tito is a delicate Italian artist who lives with his aunt Malenotti, who sees in her niece all that life holds for her. Horace Vanburg, of fine, aristocratic New York family, goes abroad to study art and he meets Bettina, to Mother Malenotti's disgust and malicious hatred. The American has entered her paradise and is carrying off her angel, so some day he must pay for this deed, and also for his father's slight, the elder Vanburg refusing to receive or recognize Bettina. Tito's birth costs Bettina her life, and Mother Malenotti conceals the babe, saying the son was born dead. Horace Vanburg begins to pay the price when he meets Tito in New York searching for that father who left him nameless and made his mother a shameful thing. Thus had Mother Malenotti instructed Tito and daily lived in the boy's rage until she died, and Tito went to America. How Vanburg learns that Tito is his boy, and how Tito yields to his love for his father and does not carry out his vow, and how Tito saves Vanburg by effecting a reconciliation with his (Vanburg's) father, is narrated by the author. Mr. Carson has created some impossible situations, for one can hardly imagine how the lovely, delicate, sensitive Bettina could have had such relatives as Mother Malenotti, the most Italian character in the book. Mr. Carson has transported Americanized Italians to Italy, and in Bettina's case he has conceived a woman of fine aristocratic ancestry who is ambitious and has the artist's soul, but she is essentially American. The story on the whole is sensational, but the moral is good. It is a tale of passionate strife in life, in which men and women are drawn by personal desire and selfish ambition, which arouses revengeful purposes and malicious plots. There is in the boy-character, Tito, some of the wholesome atmosphere of soul advancement and the putting away of self for others. [Boston: C. M. Clark Publishing Company. Price, \$1.50.]

Gems of Thought.

... We are each of us individual color screens, and our characters are known by what we absorb or eliminate, and by what we receive and reflect. —Elizabeth S. McClure.

... Who blesses others in his daily deeds.

... Will find the healing in his spirit needs.

... For every flower in other's pathway thrives.

... Men have often sought for God's revelations of Himself through prophecies, by miracles, in written books. All that God, through outward media, could effect of self-revelation was humbly done when the physical universe took shape. The moral and spiritual self-revelation of God must be through the spiritual substance of humanity.—Joseph May.

... Talent develops itself in solitude; character in the stream of life.—Goethe.

... I know not where His islands lie.

... They shrouded palms in air.

... I only know I cannot drift.

... Beyond His love and care.

... Life is but the memories of yesterday, the duties of today, and the anticipations of tomorrow.

... We are farthest away from God when we cannot perceive him in our fellow-beings. The mirror of human nature is sadly blurred; but in the meanness and wickedness there are tokens of the divine childhood, occasional flashes of the Father's image through innumerable distortions. It is for us to show a clear reflection of



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Poultry

Profit in Peafowl.

Ornamental species are attracting more
notice of late on account of the improved
market for such stock for parks and
country estates. One of the most showy class
of exhibits at the last Boston poultry show
was a varied exhibit of peafowl, pheasants,



PEACOCK SHOWN AT BOSTON
POULTRY EXHIBITION.

guineas, etc., by Otselic poultry farms, Whiting's Point, N.Y. The illustration herewith
represents one of the most showy of Mr. Smith's peacocks. These fowls are managed by him after very much the same as
turkeys, and he considers them very profitable, the demand for breeding stock being
fully equal to the supply.

The Young Chicks.

Don't be in a hurry to feed the newly hatched chicks, no matter if they hatch rather unevenly. The ones first out will be all right for a couple of days at least. Their systems are full of yolk for some time, and too early feeding does harm rather than good. Have a little fine grit where they can find it as soon as they like.

Breadcrumbs soaked in milk are good for a start, but it is best to give them a scratching food after a day or two. Millet seed or coarse oatmeal scattered in gravel is a good food. They can be successfully raised with nothing but fine, dry grain, no soft food. But most growers prefer to give some soft food for variety. Unless there is plenty of grit, it will be necessary to use soft food, for the reason that coarse grain cannot be properly digested without plenty of grinding material.

Young chickens in coops or where the hen is confined do not usually get enough animal food. It is their natural reliance, even more than grain, and nothing else will make them grow so fast. Milk not too old is the best form, but if enough cannot be had, fine meat scraps will be good, and are convenient to use. Feed it with every meal. Hardly one farm flock in ten gets enough animal food to keep it growing at full speed.

The chickens should have time to get hungry. Don't have food where they can stuff themselves whenever they like and mope the rest of the time. Feed nearly but not quite all they can eat at a time, and at regular hours. Poultry specialists feed often, but on a farm in summer it is difficult to feed more than three times a day, and chickens will do very well on three meals, at regular times each day.

If the coops are on grass sward and moved daily, a shallow box of sand should be kept inside. A little trough for each coop is a great saver of the soft food, and a chicken fountain is a convenience. If saucers and thus are used, a shingle float with a hole in the centre will keep the chickens out of the sand.

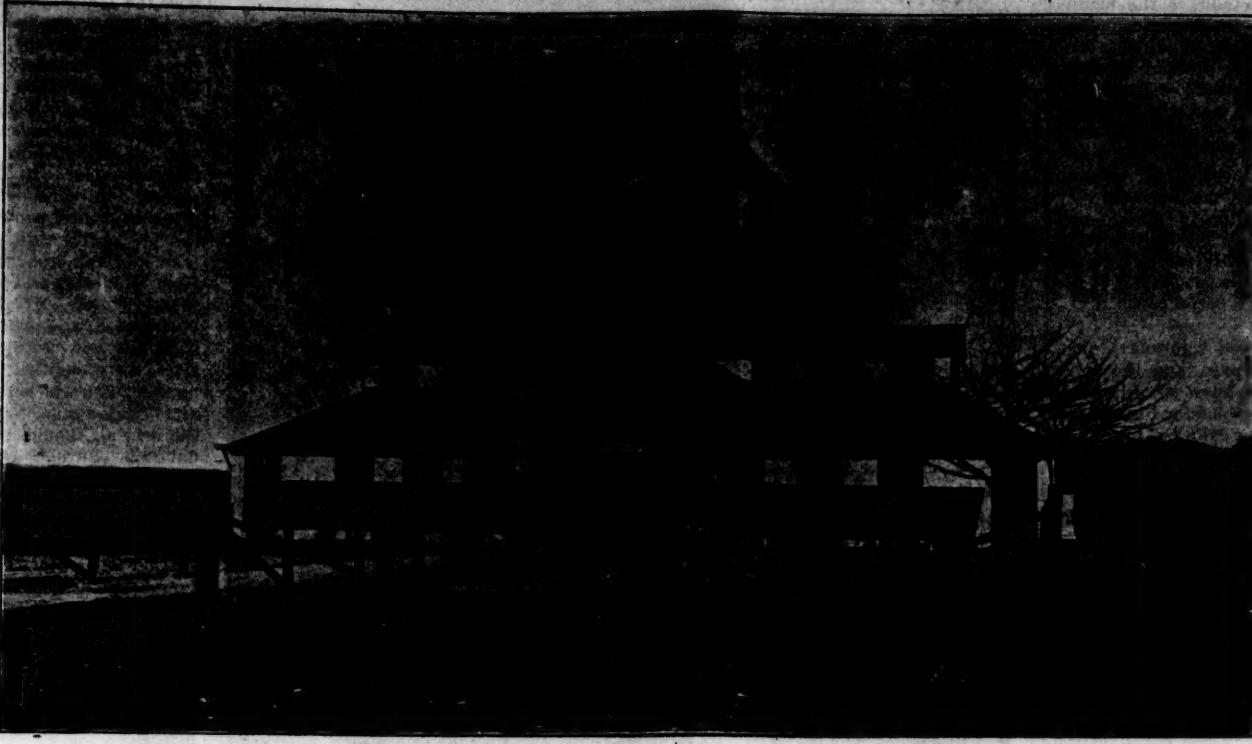
G. B. FISKE.

Food Cost of Eggs.

The Cornell Experiment Station of New York undertook the investigation of some farm-and-production experiments last winter. The experiments began on Dec. 1 and continued seventeen weeks to March 29. There were 2133 hens and pullets included in the experiment.

The intention was to determine the food cost of eggs during the winter months. Results were figured on the basis of each hundred hens, so as to make them plainer.

The average of one hundred hens in seventeen weeks was 224 dozen eggs, at a cost of 16¢ cents per dozen. The average cost of food was 32¢ cents per each one hundred hens, and the seventeen weeks



DAIRY BARN AT RHODE ISLAND EXPERIMENT FARM.

profit on each one hundred fowls was \$2.92.

According to this, the average earnings of one hundred hens for an entire year would be \$72.80; but as the hardest time of year was taken for the experiment, it is fair to conclude that one hundred good hens properly cared for in New York State will pay the farmer cash for all food consumed and a profit besides of \$100 per year.

Although the average of eggs laid by each one hundred hens was 225 dozen, they varied from 9.3 dozen to 36.1 dozen. The cost of eggs of eggs ranged from 8.7 cents to 33.9 cents per dozen. The profits ranged from \$1.80 to \$62.10 per one hundred hens for the period of seventeen weeks. The hens that laid the most eggs produced them at the least cost per dozen. Those which laid the most eggs did not cost over much to feed.

The lot of pullets laying 36.1 dozen eggs cost the same to feed as a lot of hens that lay but 9.3 dozen eggs. In the results the pullets outlast the hens, outranking them in profits, in some cases six and seven to one. A lot of White Leghorn hens made a total profit of \$6.88 for the one hundred hens in seventeen weeks. Three lots of White Leghorn pullets made profits amounting to \$8.77, \$43.98 and \$62.10. The entire experiment was in favor of early hatched pullets.

Long-Haired Rabbits.

The beautiful Angora breed of rabbit has a long, silky fleece, slightly curling and glossy white. It is a much admired feature of pet stock shows, and its drolliness and beauty render it very popular with the children. The weight is about that of the common white breed. The Angora is a trifle delicate and needs ample room, dry quarters and some care in feeding to keep it in health and vigor. Inbreeding should be avoided.

Horticultural.

Hay Trade Fairly Active.

Conditions have not changed in a marked manner since last reported. The demand for best quality is still active at full quotations, while the lower grades are fully as plenty as ever and sell with difficulty, and at irregular prices. Transportation on the highways and railroads is now improved, and this fact will tend to increase the supply if the demand warrants, so that dealers do not look for any special improvement in prices for the present, at least for the lower grades, but No. 1 and fancy hay are likely to be wanted at top prices whenever they can be obtained throughout the season.

Receipts at New York for the week were \$100 tons, an amount about 3000 tons less than the receipts for last week, but the proportion of the new receipts is so largely lower grade that these are abundant and prices seem a little weaker, although nominal quotations are the same. Trade is considered rather light except for better grades. Ryegrass is abundant and prices have not recovered from the recent drop, in fact, the tendency has been to lower quotations for several weeks past.

At Boston the supply of low-grade hay has been increasing, and the market is almost glutted with this quantity. Some has arrived in a damaged condition, particularly clover and clover mixed, having heat in the ears. These lots have a tendency to weaken the prices, but for standard lots of standard grades, quotations are practically unchanged from last week. The receipts for the week were 315 carloads, of which sixty carloads were for export, also twelve carloads of straw. These figures are about 150 carloads less than the receipts at the same time last year, but the proportion for export this year is much smaller, so that the net available for home market is about the same. Hay straw is selling slowly at former quotations.

The Western markets, at Chicago, Cincinnati and Cleveland, report active markets and rather light receipts, barely sufficient for the demand in some cases. Prices at these markets report firm. Southern markets also report receipts light and prices steady.

Following are the highest prices quoted by the Hay Trade Journal at leading markets: Boston \$19.50, New York \$21, Jersey City \$21, Philadelphia \$20, Providence \$20, Brooklyn \$21, Buffalo \$17, Pittsburgh \$18.50, Kansas City \$12.50, Duluth \$12, Minneapolis \$12.25, Baltimore \$19.50, Chicago \$14.50, St. Louis \$16, Cincinnati \$17.75, Nashville \$19.50, Montreal \$9.50, Cleveland \$17, New Orleans \$20.50, Washington \$18.50.

Grain Markets Weak.

Nothing of special importance has occurred to upset the grain markets, but the average of influences has tended to slightly lower prices. Wheat is a fraction lower. Corn and oats about one cent lower, corn meal lower in some markets and unchanged in others. Bran, shorts, middlings, cottonseed oil, meal and similar products are all lower. Flour is unchanged. Dealers and experts seemed to expect a rather low level of prices to be maintained for some time. The big crop promised from the winter wheat areas exerts a depressing effect on the present market. The coming wheat crop is reported as in almost perfect condition. Nothing but drought and too hot weather would seem able to prevent a heavy yield everywhere in the American wheat sections. The foreign crop also promises well, the only unfavorable reports

coming from Russia. The Argentine Republic has a great wheat surplus, and is this year taking the Australian market away from the United States, besides sending to Europe as much wheat as usual.

Improved Apple Situation.

Receipts of apples are moderate and of better quality, and dealers think the condition has somewhat improved. The improvement, however, is more in respect to quality of arrivals than to the price received.

The market is not glutted with so many low grades of apples, ready to decay and which must be forced on the consumer at any price.

The partial disappearance of these grades makes a better demand for the better qualities. A western Massachusetts grower, who takes great pains with his crop, producing a high grade, well-colored, well-sorted Baldwin, reports recent sales at \$3 per barrel. This is way above the ordinary market. York & Whitney report \$2.50 as the top price for best Maine Baldwins. The average lots of apples, mostly Baldwins, quote at \$1 to \$1.75. Russets are in somewhat better demand, and reasonably good lots bring \$1.50. The Southern trade is about over, as dealers think it is becoming too late in the season to ship safely, except a few lots of Ben Davis and Russets, which will stand transportation at this season of the year, for a short distance.

The foreign market is almost done. Nothing but Ben Davis and Russets will stand transportation so late in the season, and these are sent in small quantities. The situation in Liverpool and London is steadily improving, and dealers say such lots as are shipped now are likely to meet a favorable market at somewhat better prices than are now quoted. G. A. Cochrane reports the last net returns ranging from 80 cents to \$2. The great range in prices being due to the poor condition in which some of the apples arrive.

The New York market is reported as irregular on account of the wide range in quality. Lots which are in very poor shape for keeping are still sold at low prices, but fancy fruit shows a tendency to advance.

Most, though not all, of the top-price lots come from cold storage. A New York dealer talks interestingly through a recent interview, published in a New York daily paper, the subject being "Cold Storage."

"The freezing houses have made it possible to have perfect apples the year round. Not only have they done this, but they have completely revolutionized the trade in the fruit, and transformed the orchard industry from a losing venture to a most profitable one. At one time owners of orchards would hardly go to the expense and trouble of picking their crops from the trees on account of the ruinous prices prevailing, and the perishable nature of the shipments."

"In those days thousands and thousands of barrels of choice apples were allowed to rot on the ground after a few had been gathered for older purposes and home use, and even where the fruit was gathered, it was often sold for a pitifully small sum to preserving concerns."

"But all this is now changed. The ability to preserve the fruit for future demand has made the crop a valuable one, and very few choice apples are wasted these days.

Throughout the State of Oregon, which seems to be very favorable to the growth of apples, and from where we now get the choicer varieties, large orchards have been planted in the past couple of years, and the shipments from that State are steadily increasing. All fall shipments of apples from the West to commission men in New York and other large cities are now made with the proviso that if the market is glutted and they cannot be disposed of immediately at fair prices, they shall be placed in cold storage to await a more favorable market.

"The great number of apples placed in cold-storage warehouses do not begin to come into the market until after the Christmas holidays. The less hardy varieties are sent out about then—that will not keep for any great period even under the freezing process. From then on the warehouses send out just enough to keep the market steady. Just now there is a general cleaning out, and the apples are coming into the market very fast, but at that, some very choice varieties admit of carrying over until early in July, and the last of the warehouse stock will be out of the way by the time the earlier varieties of the new crop are ready to ship, thus assuring us of apples at all seasons of the year."

"Any extra preparation needed for the freezing process? No, not particularly. Possibly a little more care in picking and packing to avoid bruising. The apples are placed in the cold-storage rooms in exactly the same barrels and boxes in which they are shipped from the grower, without the removal of a barrel-head or box-lid. The temperature is kept constantly at 32°, and it is a pretty safe assertion that any apples going into the warehouses in perfect condition will appear so when displayed for sale on their appearance in the markets."

The total apple shipments to European ports during the week ending April 4 were 23,829 barrels, including 4,061 barrels from Boston, 2,400 barrels from New York, 7,603 barrels from Portland, 2,60 barrels from Halifax and 2,607 barrels from St. John. The total shipments included 14,038 barrels to Liverpool, 3,577 barrels to London, 2,600 barrels to Glasgow and 1,416 barrels to various ports. The shipments for the same week last year were 2719 barrels. The total shipments since the

opening of the season have been 2,446,098 barrels, again 2,750,814 barrels for the same season last year. The total shipments this season include 303,486 barrels from Boston, 685,542 barrels from New York, 319,152 barrels from Portland, 476,756 barrels from Montreal, 74,496 barrels from Halifax and 74,963 barrels from St. John.

Over-Watering Plants.

It is not easily understood by some that plants can be over-watered. But the fact is, they may be literally drowned—and this often happens.

The position of water in the life-workings of a plant is chiefly that of carrier—it is taken up by the roots, carries food to all parts of the plant and mostly passes off into the atmosphere through the leaves. This routine is necessary—without it growth cannot be made, while a surfeit of water brings decay of the parts in touch with the excess.

The times when over-watering is most possible are when a plant is without leaves, dormant or nearly so, and water cannot be used speedily; when the soil is heavy and does not give up the moisture quickly; when a plant has been recently transplanted and new feeding fibres have not been formed to take up the moisture; and when evergreens are in question, the leaves of which do not pass the water so readily.

House plants may suffer for lack of regular watering if the atmosphere is warm; or they may have too much water if the conditions are as described.

Transplanted plants like moisture to give them a start, and usually take a thorough soaking; but that once is all that is needed, and that the plant can well stand.

Just a little of forethought and study are needed to make evident a plant's needs and its limitations; and there is but little excuse for over-watering, yet strange to say it is a more common occurrence than many would suppose.—Floral Life.

Good Orchard Treatment.

Twenty loads of good stable manure had been added along in November, had been plowed and then rye had been sown. Early in the spring, before the rye had grown ripe, it was plowed under. The ground then was disked after each rainfall. The rains ceased about May 1. The disking was continued, only enough to keep the crust broken after every rain. At the end of the drought, Aug. 1, there was 16 per cent. of moisture in the first fifteen inches. I sampled an orchard that had not had that treatment, and the percentage of moisture on the first fifteen inches was 9%. I believe the humus was more than half to be credited for saving that moisture.

What does that much moisture mean to us? It means almost two inches of rainfall. Corn cannot grow—at least in my experience it cannot mature—when the moisture falls to 8% per cent. on the best soil, and on clay soil cannot grow; with moisture at 12% per cent. the corn would be absolutely dead. Soils contain about twenty per cent. of moisture when they are in good tillable condition; so this soil was in first-class growing condition for crops. In sampling I could scrape off the soil and roll it into mud balls; that shows you something of the value of vegetable matter in the soil.

PROF. J. W. CLOTHIER,
Cape Girardeau, Mo.

Plant More Fruit Trees.

Because a man is not young, is it any reason why he should not be planting fruit trees? I believe not. As long as a man lives, I think he should plant an occasional tree, even if he does not care to set a whole orchard, which in some cases he should do. He has received the benefit from some one's planting, and why should he not plant for some one else, even if he does not live to eat the fruit of the tree?

So long as he lives on the farm he should take an interest in its beauty and usefulness. Instances are published where men have made considerable money from orchards set by them after fifty years of age, and why shouldn't they reasonably expect to eat fruit from trees set then or after?

New Hampshire. F. H. DOW.

THE CREAM SEPARATOR.

It is remarkable and constantly increasing in sale.

The advertisement of the De Laval Company in this week's issue gives a very interesting and imposing array of the prominent users of the De Laval machines and certainly constitutes a splendid testimonial to these machines, which were the first to be introduced, and which their enterprising makers have ever kept well in the van in this important industry.

The most remarkable development in dairying in recent years, if not in all its history, has been the centrifugal cream separator. The application of mechanical force to the separation of cream has worked several evolutions within the past twenty years in this branch of agriculture, each of the greatest importance both to producer and consumer.

After ten years of experiment by different persons Dr. De Laval of Sweden perfected the first practical separator in 1879, the introduction of which followed in America about 1883. The first machines were of power types for factory or creamery use, intended for separation of the milk gathered

together at the factory. This worked an evolution in the system then obtaining of raising the cream in cans or pans on the farm and delivering the cream only to the factory. The new method of centrifugal separation saved on an average as much as twenty-five per cent. of the butter fat which went to waste in the old way.

Some five years later the first hand machine was perfected and introduced by the De Laval Company, but was limited in capacity and rather heavy and tiresome of operation. Still the advantages of the separator were so great that it attained quite a large sale in dairies where cream or butter was sold privately and there was more profit in this than in turning it over to the factory for co-operative production.

In 1890 Baron von Bechtolsheim, a German, worked another evolution in the separator by putting a system of discs or closely fitting cones into the separating bowl, which gave a bowl to a given size very much greater capacity than before, and at less speed, at the same time enabling even more complete separation than the earlier machines. This invention too came to the hands of the De Laval Company and was perfected by them.

With the help of the so-called "disc" construction and still further improvements, mostly by Americans, the sale of cream separators has enormously increased throughout every country in the world in which dairying is practiced, and today centrifugal separation of cream is almost universal.

The sale of De Laval machines alone is said to approach five hundred thousand, while a great many have been sold by other concerns, which by the expiration of earlier patents have been enabled to take up the manufacture of modified types of

MASSACHUSETTS PLoughman
A WEEKLY JOURNAL OF AGRICULTURE

TELEPHONE NO. 2707 MAIN.

How the May flowers will come up?

The foul strike rule seems likely to be ruled out.

Reverie apparently feels the need of reviving the ducking-stool.

If you want to know whether you're on the voting list—why, ask the pleeceman.

John Brown's cottage has been destroyed by fire, but what difference does that make to his soul?

If a recent bill becomes a law, every young woman who is caught with a bird on her bonnet will have to prove that it is there for scientific purposes.

Isn't it rather surprising that the publishers of Herr Beyerlein's little book "Jens and Sedan" didn't capture a letter from Admiral Dewey and use it as a preface?

Dr. Grenfell certainly deserves all the assistance that can come to him—even if a contemporary does picture his errand in Boston as arousing men and women to hold up their hands.

In suggesting a likeness between modern civilization and an extra large Belshazzar's feast, Dr. Lorimer rather overlooks the fact that there are still a good many saving millions of us who don't care for terrapin.

If the "polyglot Bulgarian" who arrived on the New England is a thorough master of his collection of languages, he comes almost in the nick of time to help a lot of sturdy young Americans capture their Aegean.

When a man wants to build a bay window out over the sidewalk, we fear he will find small comfort in Mayor Collins' suggestion that there is plenty of space in eastern Massachusetts. It's a long way off to move a house.

A recent reformer says that "American civilization is like a pie. The top crust—the four hundred—is steeped in champagne, while the bottom is soggy with beer." We are very sorry for any person who has this idea of a pie.

The Rev. Dr. Haldeman is frankly interested in the Rev. Dr. Funk's interesting story of psychic manifestations. Evidently Dr. Haldeman believes in ghosts; but not in such ghosts as a Christian minister should care to associate with.

Although there are no available statistics, we imagine, when a body of police make an unsuccessful raid, that the game of checkers is more often interrupted than any other. But why not Tiddly-winks? That would be even more ironical.

"Surely," says the St. Louis Globe, "the open-work stockings that prevailed last summer have already been revived, for one sees them every day upon the street, even in chilly weather." Close observers pretend to have noticed the same phenomena in Boston.

It seems a pity to have one's enjoyment of a good mummy spoiled by the discovery of a Parisian factory especially devoted to manufacturing them. In fact, it even introduces an element of discord into the relations that have so happily existed between us and our Colonial furniture.

The recent cold snap appears to have caused less injury than might have been supposed. But not having developed to any great extent were able to endure the freezing temperature fairly well. In sections where cherry trees were in blossom it is as yet too soon to determine the extent of damage.

Apple shipments for the year have been fully three times those of last year, and plenty more still in storage. Were it not for this foreign outlet, the situation that would have prevailed in the home market may be imagined from the wretched conditions noted when the British markets were oversupplied for a few weeks at a time.

After something of a lullage of celebrities, Indiana is now adding variety to the list by producing a man whom the doctors say will live to be two hundred years old. The assumption is based on the moderation with which he has lived twenty-five years already and reached only the development of a boy of five. But suppose he gets the measles?

It is hinted that the coming Chicago newspaper, owned, edited and managed entirely by women, is to have a Man's Column, and perhaps even a department of beauty hints for sterner readers. Undoubtedly, this would amuse the sterner sex; nor would the world be any the wiser concerning those who mocked in public, and then tried a hint or so in private,—just out of curiosity, you know.

Nothing especially alarming has occurred in regard to the cattle epidemic. Cases during recent weeks have been wholly confined to the two New Hampshire counties where the late outbreak began, and the number of infected herds discovered during the past week is less than a dozen. At the office of the United States Cattle Bureau in Boston it was stated that there is no truth in the report of an outbreak in New York State.

Oleomargarine seems to be growing unpopular according to reports of revenue tax paid. It appears that the amount taxed has risen from seventy-four million to six million pounds during the past eight months. Although these figures do not agree with claims made that sales have vastly increased, the facts are as stated, unless the oleo people have found some unlawful way to avoid the tax. It is probable that much of the decrease is owing to the growing competition of renovated or process butter.

American meat exporters are hard hit by the new German laws, which for pork products require three inspections with expensive microscopic examination. This practically kills the trade and is also a hardship on the German working classes which have been accustomed to using American shoulder pieces and hams. German legislators, in their zeal to protect home interests, seem to have overdone the matter, and the discontent of the meat-eating public is likely to force some relaxation of the new regulations. It is thought that the beef trade with Germany, although greatly hampered, will be able to continue.

The latest butter swindle is the manufactured imitation of the unadulterated sweet cream butter much sought by Jewish consumers. The fraudulent product is made from poor stock and other low-grade butter, which is melted, curdled with milk and sold as butter from fresh cream. It is soft, watery stuff and is not stamped as "renovated." Hence the government revenue agents propose to make the business very unpleasant for the dealers in Chicago and elsewhere who have been selling this stuff, one-third water and two-thirds swindle, at fancy prices. The endless ingenuity of the butter fakers is worthy a better cause.

Nut culture has enjoyed vigorous promotion for a dozen years past, and the large varieties of chestnuts have usually been considered the most promising branch of the specialty. Yet the number of profitable chestnut orchards remains very few as shown by a recent census. Profitable groves seem rather more numerous than orchards. Groves are made by grafting the sprouts in forest land, while orchards composed of nursery trees are started in the same manner as fruit orchards. The most serious drawbacks are fire thieves and the weevil. The leading varieties of chestnuts, too, all seem to have defects. The Japan sorts are considered poor in flavor; the Nambu is claimed to be a shy bearer, while the Paragon is difficult to harvest because the burrs fail to open. Still there are a few profitable orchards and groves reported, and what can be done by some should soon be accomplished by many. Nut culture is very much of a specialty, and its mastery requires time and experience. While present results afford no ground for a boom, there is sufficient encouragement for careful, progressive experiments.

Dairy Markets Firm.

Several lines of high-grade, fresh-made butter show advance of a fraction of a cent per pound, and the general situation is firm on account of light receipts.

Demand, although not very brisk, is sufficient to take care of stocks on hand.

Storage stock is pretty well cleaned up, and the market depends practically on new receipts for the best class of trade.

There is some demand for inferior grades, but not enough to raise prices. Dairy butter made from new spring milk is selling readily at top quotations, while print and box goods are in fair demand. The foreign markets are reported unchanged.

Chapin & Adams: "The market is firm on choice grades, the receipts being light. Undergraduates remain unchanged. The Boston market is now more dependent than formerly on the markets of New York and the West. When we obtained the bulk of our supplies from the North, our prices did not necessarily follow other markets, but now that we receive so much Western butter, a shortage at Chicago and other Western receiving points affects all Eastern markets to some extent. This is the real explanation of the present situation. Our dealers are obliged to pay Western prices or they cannot get the goods."

The market at New York has been rather scantily supplied, but Wednesday's report showed receipts of 866 packages, and Western goods were said to be coming forward more promptly. The active demand has likewise increased the shipments of nearby markets, so that the tendency appears to indicate an increased supply. So far all arrivals have been readily taken up at quotations, the demand being reasonably active.

A few extra fancy lots have sold at 29 cents, but the prevailing price for choice goods is 30 cents. Other lots, and these are very numerous, are not so attractively packed and bring only 27½ to 28½ cents.

Storage creamery, if any, brings 25 cents, such stock being now rather scarce and offered in small lots.

Reports from Montreal allege that contracts have been made for the whole of the April output at all the way from 12½ to 13 cents. A few mention higher prices, and a dealer in the city mentions lower ones, both doubtless in their own interests. At any rate, there is no cheese in Montreal for sale, and no doubt everything offered is taken eagerly and forwarded to England as rapidly as possible. Every factory throughout Canada, which is equipped for cheese, will turn out nothing but that product all spring. Montreal prices on a basis of what is being paid in the country, would not be less than 13 to 13½ cents.

The consumption of butter in the United States, according to the census report, of the production of butter and the population for the years 1890-1900, has not varied materially. For the year 1890 the figures show at 18.7.

Going into details and using the figures of the production of butter on the farms, in the factories and urban dairies, including the imports excluding the exports left for home consumption 1,474,477,749 pounds of butter, which divided by the 76,212,168 people gives to each a little of 19 pounds per capita. Upon the same basis the consumption of cheese about 3.5 pounds.

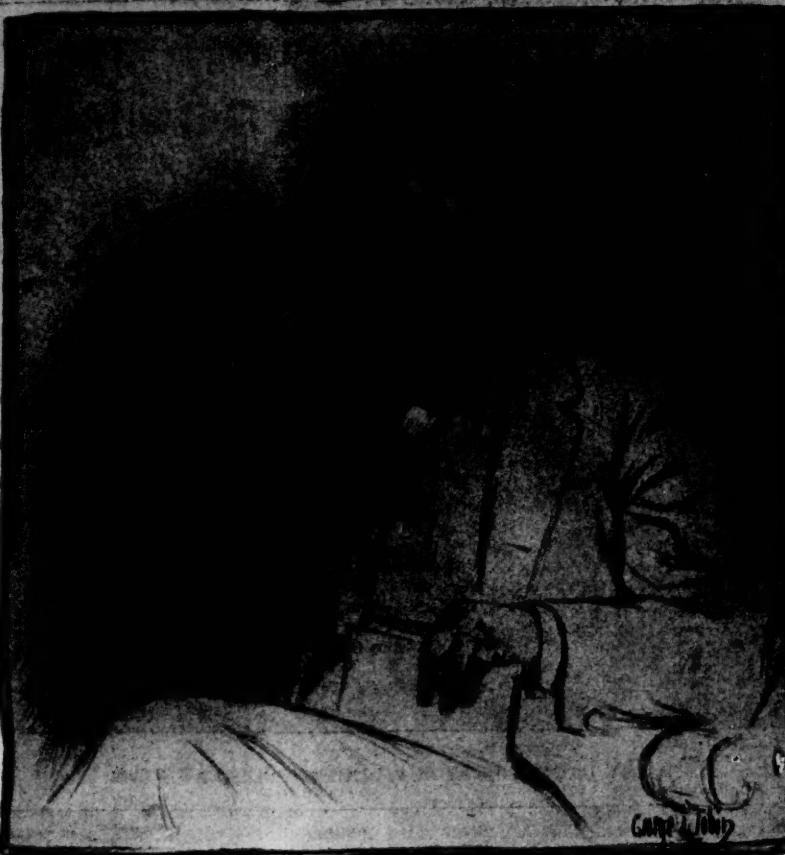
These figures seem low, particularly on cheese, when the high standard of living in the country is compared with the European countries.

Great Britain consumes about twenty-five pounds of butter per capita and eighteen pounds of cheese. This increased consumption by our British cousins comes not so much from direct eating of bread and butter, but because of the large amount used in manufacturing and cooking, the biscuit trade using large amounts in addition to the confectionery trade.

A Washington dispatch says: "Although it was argued at the time the oleomargarine act was under consideration in Congress that the tax of 10 cents a pound, imposed upon the product, colored in imitation of butter would not injuriously affect the industry, the claim of the opponents of the law that it would be realized. The official statistics given out by the commissioner of internal revenue show that, although the tax on the uncolored product was reduced from 2 cents to one-fourth of a cent a pound, the revenue derived during the eight months ending Feb. 28 last was only \$12,800, compared with receipts of \$1,463,924 during the corresponding period of the previous year under the old law. The total receipts from oleomargarine under the new law during the eight months was \$285,582, compared with \$1,906,461 during the corresponding period under the old law."

The revenue collectors have found that the consumption of oleomargarine under the new law is less than one-twelfth what it was under the old law. In the eight months last mentioned only six million pounds were taxed, while under the old law 74,000,000 pounds were taxed. Naturally the number of retailers proportionately decreased.

Receipts at New York for the week, 617,928 pounds of butter, 1743 boxes of cheese and 68,437 cases of eggs, against receipts for corresponding week last year of 615,795 pounds of butter, 1041 boxes cheese and 28,738 cases of eggs. At New York the



DR. S. WEIR MITCHELL.

By Permission of the Century Company.

receipts for the week were 35,594 packages butter, 9425 packages cheese and 130,834 cases of eggs, against receipts for corresponding week last year of 28,047 packages butter, 10,191 packages cheese and 90,023 cases of eggs.

Oats and Peas.

Oats cut when the tips of the head are just beginning to turn, or when the kernel is in the dough stage, make one of the finest foods I know of for milch cows. For economy and utility, they are second only to clover, hay and corn ensilage.

A mixture of peas and oats is still better than oats alone. Peas should be plowed in from three to four inches deep, about a week before oats are sown on the surface. We have also sown a late variety of wheat with the oats with excellent results for cattle feeding. In all cases the grain is cut with the binder as low as possible. Care should be taken to have the bundles small so that they will cure well in the shock without moulding in the centre of the bundle. In this method of feeding oats and peas, not only is the threshing and grinding of the grain saved, but the feeding value of the fodder is very much enhanced and much more digestible by the animal. We consider oat hay worth three times as much as timothy hay, ton for ton, when fed to milk cows. If it is well cured there is no fodder that cows will eat more readily except it be ensilage.

Demonstrations of Immortality.

Easter being the day when, above all days, the dogma of immortality is exploited, it is a not inappropriate season to consider demonstrations of this doctrine. Especially timely are reflections concerning such a topic, because of the recent much-disgraced case of Dr. Funk and Dr. Beecher. A case, it is interesting to note, that has come to Boston for settlement—Boston being the American headquarters of the Society for Psychical Research and Dr. Richard Hodgson, the society's secretary, Boston man. Dr. Hodgson believes that his society has absolutely proven immortality. To quote his own words, "Personally I am not convinced by proofs too intimate and too recent to be given out that we have absolutely demonstrated immortality. The case I have called 'George Pelham,' and have made the subject of a special study and report, has proved immortality to many others as well as myself. I first began to talk with George Pelham eight or nine years ago through our medium in whom I have implicit confidence. The man's name wasn't George Pelham, but it is so I have called him in public. He was a great friend of mine, and to me he has absolutely proved his individuality by special manifestations."

Dr. Hodgson, in his report concerning George Pelham, has given very many convincing facts and figures. G. P., we learn, recognizes at the first manifestation "John Hart," an old friend, gives intimate facts and names concerning articles brought by Mr. Hart, as, for instance, that Hart wears studs taken by G. P.'s step-mother from his body after his accidental death and handed by her to his father with the suggestion that he send them to Hart. There are too, thirty cases of recognition out of 150 cases with whom G. P. talked through the medium.

One of the most interesting single instances in Dr. Hodgson's experience, however, has to do with another personality.

He tells the story thus: "On my way out to keep an appointment with our medium of the death of a certain friend of mine, whose voice had already passed beyond. At the house of the medium this voice told me, through automatic writing, that her uncle had just come over. 'I was with uncle at the last,' the communicator went on to say, 'and I told him not to be disturbed, that he would be even happier over here than in the world with auntie.' This seemed to me very interesting, and I was anxious to verify it, if I could, but I naturally felt the impossibility of speaking to the widow about the matter at that time. It happened, however, that a friend of mine was sent for by the widow to come and stay with her, and in their conversation the bereaved lady said: 'Our niece came to him at the end,' he told me, and said, 'Don't be disturbed. You'll be even happier here than in the world with auntie.' Precisely the same form of words you see!"

Gladstone said once, we believe, that he regarded the Psychical Society's labors as the most important work in the world. Certainly this body has done some few things worth while. It has proved telepathy, established the fact that there is such a thing as clairvoyance, detected and explained the methods used by various trickster mediums who pretend to be possessed of supernatural powers, demonstrated (in 1886) that Madam Blavatsky's pretensions were founded on spurious marvels,—and it has now established to the satisfaction of many people skeptical of the thing to start with the presumption that individuals may and do communicate after death with friends still on this side of the dividing veil.

The man who runs a corner has two problems: First, he must buy all the regular wheat, so that the shorts can get none to deliver except upon his own terms. Second, he must dispose of the grain which he has accumulated in cornering the supply. When the shorts settle, the price will inevitably fall.

He must get enough out of them to make himself whole when it comes to selling his own accumulation at the lower price.

In 1897 appeared Joseph Leiter, the bold, strong and strongest of them all—or the most reckless man with the greatest amount of money to lose, as the critics choose. He had the strongest wheat position ever known in the trade. The importing countries of Europe had produced only 770,000 bushels of wheat, against 900,000,000 bushels the year before. Reserves everywhere were low. Among exporting coun-

tries the United States alone showed any considerable surplus. To buy this surplus for 10¢—theoretically. But with every five cents' advance at Chicago, grain appeared as if by magic. The Northwest scraped its granaries. Russia ate rye and emptied its mill-bins of wheat. Argentina swept the floor. In December the Chicago market was cornered—on paper; but Armour kept steel-prowed tugs ploughing up the ice at the head of the lake, and, by lake and rail, moved six million bushels from Minnesota and the Dakotas to Chicago in midwinter. Mr. Leiter paid for every bushel of it, and marked the price up from eight-five cents to \$1.00. Still more granaries were emptied, and wheat poured to market. The war between the United States and Spain came on, as opportunely for the deal as though it had been carefully devised. Europe became panic-stricken over a vision of American wheat shipments cut off by Spanish men-of-war. France suspended her wheat import duties of 36 cents a bushel. Other countries followed. At Chicago \$1.45 was paid for cash wheat for export. The newspapers figured Mr. Leiter's profits far into the millions. But with every advance in price more wheat appeared, and when it came to disposing of the forty or fifty millions that had been accumulated in controlling the market, the paper profits melted; a huge deficit appeared.

Mr. Hutchinson, the first cornerer, said that the trouble was not in getting control of the market, but in "getting rid of the corpse"—that is, in disposing of the wheat accumulated during the deal. His own great winnings finally vanished.

Choice of a Business Apple.

The Astrachan is one of the best selling varieties owing to its bright red color; is good for cooking and quite popular.

The Williams is better for a table apple, but rather difficult to harvest in its best condition, as it needs to be left on the tree until it is fully ripe to gain its best color and flavor. They sometimes sell as high as \$4 per barrel. The tree is a rather scraggly grower, and should be pruned often.

The Gravenstein succeeds well in some sections, doing best in light but rich soil. In heavy land it is a slow grower, and the fruit does not keep well. For all purposes it is the best, being excellent in size and quality.

The Wealthy does not bruise as readily as some apples. It is a handsome fruit and good for market, as it sells rapidly.

Of the old standby, Baldwin, I hardly know what to say. I have seen but few good Baldwins in the last two years; nearly all had the brown spots under the skin, and were almost worthless. Unless we can grow better fruit, I would hardly advise planting all Baldwins as some now do. Doubtless the Baldwin will produce the best tree and the most fruit of any variety, yet it is often poor in quality.

The Hubbardston Nonesuch is very productive, a good hardy tree, and the fruit sells readily for table use, though it is not so good for cooking.

Rhode Island Greenings will yield a moderate crop of apples each year, if well fertilized, and in the market is a rival of the Baldwin, gaining in popularity each year.

The Sutton or Sutton Beauty, as it is frequently called, is one of the best growing trees in the nursery and young orchards that we have. It is a hardy, vigorous grower, and the fruit is of fine appearance, resembling the Baldwin.

S. T. MAYNARD.
Northboro, Mass.

Notes from Central Vt.

Randolph is a very fine agricultural section. Corn has supplanted sheep. Cattle have not consumed a large amount of fodder the past winter. Milk is selling well.

The great obstacle to farming here is the scarcity of help. Farmers are offering \$25 to \$26 per month and board, for eight to ten months. One farmer is reported to have engaged a man at \$32 per month and board, for ten months. March has been a very warm month and farm work has commenced. The maple-sugar crop has been almost a failure.

Arthur Smith, South Randolph, is milking fifteen cows for the week ending March 21. He made 102½ pounds of butter, for which he has a yearly contract at twenty-three cents a pound. N. C. Howard, Randolph Centre, has started a novel enterprise raising blue foxes. They are a native of Alaska, and their fur is said to be valuable. He imported six in the fall of 1901. One died and he raised four last year. The Randolph Co-operative Butter Company, Randolph, is making about seven thousand pounds butter per week, which it sells at \$1.00 a pound. C. Brigham Company of Boston are taking at their creamery, East Brattleboro, some five thousand pounds of milk per day. The cream is sent to Boston. They are also taking at their creamery, Brookfield, some six thousand pounds per day. This cream is shipped to Randolph, where it is made into butter.

Fat hogs are selling for seven cents per pound, live weight. Pigs are scarce and prices high. Mr. S. Follesbee, Brookfield, reports that he milked three cows for the year 1902, and after supplying his family with milk, he carried the balance to the creamery, for which he received \$24.35, an average of \$8.11.45 per cow.

H. P. WEEKS.

Most everybody has to pump water. Whether you do it by

DISCOMFORT AFTER MEALS.

Feeling oppressed with a sensation of stuffiness, and finding the food both to digest and painfully hang like a heavy weight at the pit of the stomach are symptoms of Indigestion. With these the sufferers will often have Constipation, Inward Piles, Fullness of the Blood in the Head, Aoldity of the Stomach, Nausea, Heartburn, Headache, Sinking or Fluttering of the Heart, Choking or Suffocating Sensations when in a lying posture, Dizziness on rising suddenly, Dots or Worms before the Sight, Fever and Dull Pain in the Head, Deficiency of Perspiration, Yellowness of the Skin and Eyes, Pain in the Side, Chest, Limbs and Sudden Flushes of Heat. A few doses of

Radway's Pills

will free the system of all the above-named disorders. Purely vegetable. Price, 25 cents per box. Sold by all druggists, or sent by mail on receipt of price.

RADWAY & CO., 55 Elm Street, New York.

Be sure to get "Radway's."

Poetry.

WE PUT OUR HANDS IN THINE.

We put our hands in Thine, dear Lord,
We put our hands in Thine,
When weeping in Gethsemane,
We seek Thy love, divine.

We put our hands in Thine, dear Lord,
When grief and trouble beat;
When faint our hearts'neath heavy loads,
In Thee we find retreat.

But when the breezes gently blow
Our barques over summer seas,
Dear Lord, we falter and forget
The shelter found in Thee.

Yet even are Thy hands outstretched
To earth, from Heaven above;
We may forget and turn away;
Thy love, dear Lord, is love.

Cleveland, O. EDGAR LEE

DR. GOODHEER'S BENEDY.

Fel all out of kilter, do you?
Nothing goes to suit you, quite?

Skins seem sort of dark and clouded,
Though the day is fair and bright?

Eyes affected—fall to notice?

Beauty spread on every hand?

Hearing so impaired you're missing
Songs of promise, sweet and grand?

No, your ease is not uncommon—

"Tis a popular distress;
Though 'tis not at all contagious,
Thousands have it, more or less;

But it yields to simple treatment,

And is easy, quite, to cure?

If you follow my directions
Convalescence, quick, is sure.

Take a bit of cheerful thinking,
Add a portion of content,

And, with both, let glad endeavor,

Mixed with earnestness, be bent:

These, with care and skill compounded,

Will produce a magic oil

That is bound to cure, if taken
With a lot of honest toll.

If your heart is dull and heavy,
If your hope is pale with doubt,
Try this wondrous Oil of Promise,
For 't will drive the evil out.

Who will mix it? Not the druggist
From the bottles on his shelf;

The ingredients required
You must find within yourself.

—Success.

AD INFINITUM.

Dr. Dempsey of Boston announces that he has found a specific insect which preys upon the anopheline mosquito. He is cultivating the creature artificially, with the expectation of destroying the mosquito and the host of germs which inhabit its body.

They've found the bug
That eats the bug
That fights the bug
That bites us;
They've traced the germ
That kills the germ
That chews the germ
That smites us.

They know the bug
That knives the bug
That stabs the bug
That jabs us;
They've seen the germ
That hates the germ
That biffs the germ
That nabs us.

They've struck the bug
That slays the bug
That lays the bug
That sticks us;
They've felled the germ
That guides the germ
That taught the germ
That took us.

But still these bugs—
Microbes—
In spite of drugs
Combat us;
And still these germs—
Described in terms
Inspiring squirms—
Get at us!

—W. D. Nesbit, in Life.

SPRING RAIN.

The cry of the water-courses for the songs of the forest children, The birth of the freshness of springing green, Where the winter drift has lain; A hope of the world-wide spaces in the balm of the wind's caresses, And sleep at the heart of the underworld the joy of the roots in rain.

The stirrings of plashing footsteps where the rustles drink and tremble, The glow of the April-changing sun on the drop of last-field dew; The joy at the home-returning of the wind-worn prairie children To pat the grasses bend above and the wind-langs loiter through.

the strength of the horses plowing in the breadth of the meadow grasses, The subtle sense of the earth astir beneath the plowman's feet;

The hops of the hills at even ore the twilight lambs dissemble, The will to be going on and on where the long-lung highways meet.

The world is a world of distance for the feet of the wildwood children, The trees would have them follow on, the grasses bid them stay; And all the river instincts wake and the fear of the dream-free way.

—Lewis Worthington Smith, in Lippincott's.

...The "busy bee" is somehow made
The hero of the wondering throng.
I'd like to know what would be said
If we should sleep all winter long.

—Washington Star.

Miscellaneous.

The Unspoken Answer.

"Look here, Digby," observed Guy Maxwell to him, with that air of superiority which was peculiar to him, "there's one tomorrow left, and I must arrange to have a few words with her." Lyttleton. She's the sort of a girl who would make a fellow a real good wife. I rather think she likes me, and the fact that I am heir to baronetcy, with a good income attached, will have some weight. I intend to have a try tomorrow."

Digby Grant blew out a cloud of smoke in order to hide the expression that crept over his face. "That means," said Digby, after a pause, "that you intent to propose to her tomorrow?"

"I don't see what other interpretation you can put on it," rejoined Guy rather irritably. "You don't seem very bright today; you are tired after your walk. Your voice is a bit sharp. Have something to brace you up."

"No, thanks," said Digby, forcing a laugh. "But go on."

"Well," continued Guy, "I have fallen in love with that girl. My life will not be a happy one if I do not win her. I have mentioned my intention to you, old fellow, because I wish to ask a favor."

"What is it?" inquired Digby, surprised. "I can't help you to win Grace—I ought to say, Miss Grace Lyttleton!"

"Yes, you can!" was the astonishing rejoinder. "I suppose you will keep out of the way. You see," pursued Guy, a trifle awkwardly, "we are always together now. Now I can't propose to her without giving you a chance."

"Done!" said the boy, and the money changed hands.

"So that's my answer!" groaned Maxwell, as he made his way to his room. "Yet it was kindly of her part to wish to make a refusal. A refusal! H'm! That must be pretty uncomfortable for a man to hear when he expects to be accepted! Yet, there was a strange way of doing it, but a well-meaning way. Now I understand her appeal to my good graces. I'm off by the earliest train tomorrow. I wonder if she is in love and whom she loves!"

The question was answered six weeks later by the announcement in the newspaper of the engagement of Miss Grace Lyttleton and Mr. Digby Grant, the rising young barrister.

in every time. "See here, I'll give you this half-crown if you'll go to bed—go anywhere—and leave me!"

Digby's face lighted up and his arm began to stretch itself in the direction of the piece of silver; then his face grew sombre and he shook his head.

"That will be treachery," he explained. "Grace told me this morning that she expected you would try to say something to her to to. So she gave me a shilling to keep her all day so you shouldn't have a chance, and I agreed. I'll stick to the bargain, even if I lose it!"

Digby paused.

"Did she tell you why she didn't wish me to speak to her?" he asked, as an idea crossed his mind.

"Yes," admitted the boy. "She said she didn't want to hurt your feelings by saying something you wouldn't like, so it would be better to prevent you from saying anything to her. Girls are funny, aren't they?"

"Roy," said Maxwell, after a pause, "I understand you will give this half-crown on condition that you say nothing whatever about this we've had."

"Done!" said the boy, and the money changed hands.

"So that's my answer!" groaned Maxwell, as he made his way to his room. "Yet it was kindly of her part to wish to make a refusal. A refusal! H'm! That must be pretty uncomfortable for a man to hear when he expects to be accepted! Yet, there was a strange way of doing it, but a well-meaning way. Now I understand her appeal to my good graces. I'm off by the earliest train tomorrow. I wonder if she is in love and whom she loves!"

The question was answered six weeks later by the announcement in the newspaper of the engagement of Miss Grace Lyttleton and Mr. Digby Grant, the rising young barrister.

Doubt's Department.

A HELPING HAND.

When William clears the table
And carries out each plate,
And piles the cups and saucers,
He says his name is Kate!

And when he dons his overcoat,
And mitts and leggings trim,
And salutes forth to carry wood,
Why then his name is Jim!

But when he dresses in his best,
With collar stiff and white,
To promenade upon the street,
He's William Horace Dwight!

And would you lend a helping hand,
And be three boys in one?
You'll find that work and play unite
To make the best of fun.

Little Men and Women.

Pigments.

A pigment is a substance which imparts color to an object, as does paint. White light is made up of waves of different lengths, which, when falling upon our eyes, gives us the sensations of red, blue, green and so forth, according to the length of the waves. When all the different waves reach our eyes together, then we see white. A pigment absorbs some of these waves of light and reflects others. Thus if it is a red pigment, it absorbs blue, yellow, green and violet and reflects red. It is a yellow pigment, it reflects yellow only. All the colors are due to the pigment, for instance, there is no pigment in a rainbow. The colors of the rainbow are due to the fact that the waves of sunlight are reflected from the round raindrops at different angles, according to their length, and so the white light is split up into the different colors of which it is composed. The same is true of a glass prism.

The colors of flowers and leaves are due to pigments, also the colors of most birds and butterflies, though sometimes feathers and butterfly scales are considered as to reflect the light and diffuseness in the manner of a mirror. The prismatic effects in birds and butterflies may be known from those due to pigments by the fact that the colors change according to the angle at which the objects are viewed. One of the commonest kinds of flower pigments is that which is either pink or blue and is called anthocyan, which is to say flower blue. This sort of pigment is seen in many wild and garden flowers, and also in some leaves, as those of the cultivated coleus. It is pink when the sap is acid, blue when it is not acid or alkaline.

Another group of pigments varies from scarlet through orange to yellow. These are such as color the rays of sunflowers and the red and yellow autumn leaves. The yellow form which leaves is called xanthophyll, which means yellow leaf.

The great color of leaves is due to still another pigment called chlorophyll or leaf green. This is the color of the leaves of all the plants and flowers.

Guy Maxwell laid himself out to make another opportunity for the afternoon. He suggested to Roy that there was good scenery for an amateur photographer in the neighborhood of Roxham, about three miles away, and that the day was a perfect one. Roy appeared to catch at the idea, and Guy was hopeful.

He glanced at him shyly, half frightened, but bowed and said briefly that she would like a walk among the flowers.

"I think she guesses what is coming!" said Guy reluctantly to himself. "That makes my task easier!"

They went into the garden, and after a few steps he suggested that they should seat themselves on a rustic bench.

In view of his masterful disposition, Guy felt a little nervous about beginning. He nervously self and said:

"Miss Lyttleton, I have asked you to come here because—"

"Oh, here you are!" chimed in a shrill voice.

"Nice in here, isn't it? Get room for me?"

And Roy Lyttleton took a seat next to his sister.

"What do you think of Mr. Benson's play, Mr. Maxwell? Not up to much, is it?" asked the boy.

Guy made some kind of reply mechanically. He wished that young gentleman far away, but he had to conceal his annoyance and be pleasant.

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The Horse.**Four Wheels or Two.**

The wagon has good prospect to supersede the sulky as a racing machine. Many owners have already discarded the sulky and this season will see more wagons on the track than ever before. One of the strongest arguments in favor of the wagon is that practically every horse that is put to four wheels can play havoc with any record he made pulling a sulky. A prominent member of the New York Driving Club, who was one of the first to discard the sulky for the wagon, in explaining its advantages through Turf, Field and Farm, writes: "In the first place, the horse can be more loosely harnessed, and not strapped up so tight; he escapes, when in motion, the motion of the driver and most of that from the vehicle. Again, the driver seated in a wagon can take a lighter hold of his horse than when balanced in a sulky. The mid resistance, especially in a low-seat skeleton wagon, is much less; the weight is more equally distributed upon four wheels than two, and better balance and more freedom for the animal mean fewer boots and steeper gait; in fact, the sulky presents no advantages which the wagon does not duplicate, and the latter has many which the former cannot approach."

Sensible Buying.

I am not advertising any particular breed; choose whichever you like best after examining the demands of the market; then select a sire, weighing not less than 1800 pounds in fair flesh, and that means 1900 to two thousand pounds when in show condition, and mate him with the best class of grade draft mares that can be had, and breed in line, always trying for an improvement. If the mare is a little imperfect in some point, be sure to get a horse to mate with her that is extra good in those parts. But the mere fact that some stallion salesman tells you that his horse is the best in the world and he cannot sell him for less than \$3000 to \$4000, does not make him so, and in many instances the horse is not worth one-third of that.

If you have not a good draft stallion in your neighborhood, try to interest some good man, who knows a good horse from a plug, to buy, and if you cannot, then some of you who are friendly club together, raise the money, go to a reliable breeder and importer, who has a financial as well as a moral reputation, where there are a number of horses, and then you can make a comparison and select the best one you can buy, if he has what you want; if not, then go to another breeder and importer, and I will guarantee that if you are good judges of horses you can buy an extra good horse from three to five years old for from \$1400 to \$2000, at least much better than the scalper is trying to work you and your neighbors for a sale in a stock company for a big price. In other words, avoid the middleman, and buy at headquarters.

H. H. BRIGGS.

Elkhorn, Wis.

For the six early-closing events at Readville 112 nominations have been received, an average of nearly nineteen to a class. The Blue Hill, \$5000, for 2.30 trotters, has nineteen nominations; the Massachusetts, \$15,000, for 2.12 trotters, sixteen; the \$3000 2.15 trotting class, twenty-four; the class for three-year-old trotters eligible to the 2.25 class, seventeen; the Norfolk, \$5000, for 2.25 pacers, seventeen, and the Neponset, \$3000, for 2.10 pacers, fifteen.

In the nineteen years between 1882 and 1902 there were sold 400 yearlings at auction that made over \$3000 apiece. Scopre was the highest priced yearling ever sold in the world, having been sold at auction for ten thousand guineas, or over \$50,000.

Trouble from Teeth.

The teeth of a young horse are often the real causes of troubles which the owner explains in other ways. Lameness or "lamper," a swelling of the gums, is sometimes caused by interference of the temporary teeth with the permanent ones. A little dental work will straighten things out with far better results than firing. It should be remembered that between the ages of two years and nine months to three years the two central incisors are cast to make room for two permanent incisors in their stead, for the former were only fragile temporary foal's teeth and had fulfilled their purpose. At or about the same time the first and second temporary molars are shed and are followed by the teeth intended for life. The shedding or casting of these temporary teeth takes place in the upper and lower jawbones at the same period... Therefore the colt at his third year has sixteen permanent teeth, eight in each jaw, above and below; that is to say, when dentition goes on regularly. And with no interference young horses not feeding well at this period should be examined for possible trouble of this kind.

Hanging back in the collar is attempt to get free by bursting the throat-lash or collar-rein, and in some cases great force is applied in this way—so much so, that many horses have broken their hips from the sudden giving way of the halter, letting them back so that they fall over and injure themselves irretrievably. The only cure is a strong chain and a head stall that no force can break, after trying to burst which a few times, the horse will almost always desist. If the manger is not very firmly placed, another ring should be fixed in the wall by

THE FAST CANADIAN PACER HAROLD H., 2.04, BY ROADMASTER; DAM BY BROWN DICK.

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